Cherenkov Emission from Patients During Radiation Therapy

In the last few years the group of Brian Pogue has used ICCD cameras to image Cherenkov light emitted from patients' bodies during radiation therapy with high energetic particles/photons. The benefit is that the patient can be kept in room light which is suppressed by using small gate times only collecting light during short radiation pulses. Here they show how similar techniques are used for surface dosimetry, where they look at scintillator targets simultaneously to the Cherenkov light emission. The technique delivers fast and accurate calculation of the delivered energy dose to the patients.

Featured Paper/Publication: Time-gated scintillator imaging for real-time optical surface dosimetry in total skin electron therapy, Physics in Medicine and Biology, 2018

Reference Lab: Brian Pogue, Dartmouth College, USA

Featured Product: PI-MAX